08/390,774

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/390,774	02/17/95	MORGAN	M 30293.1US02

EXAMINER	
PAN, D	

ART UNIT	PAPER NUMBER
2302	10

B3M1/0314

GEORGE H GATES
MERCHANT GOULD SMITH EDELL
WELTER AND SCHMIDT
11150 SANTA MONICA BOULEVARD SUITE 400
LOS ANGELES CA 90025-3395

DATE MAILED: 03/14/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined ☐ Responsive to communication filed on Dec. 1995 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire three month(s), ~~_____~~ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

Part II SUMMARY OF ACTION

1. ☑ Claims 26-44 are pending in the application.
   Of the above, claims NONE are withdrawn from consideration.
2. ☑ Claims 1-25 have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☑ Claims 26-44 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other Examiner.

EXAMINER'S ACTION

PTOL-326 (Rev. 2/93)

1. Claims 26-44 are presented for examination. Claims 1-25 have been canceled.

2. Claims 26-44 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. As to claim 26, the word "traces" is referring to the free style handwritten user input, or it is referring to a restricted handwritten pattern ?

4. As to claim 27, the phrase "...handwritten input traced across the touch sensitive surface..." is not clear. For example, is it referring to a free style handwritten input, or it referring to a restricted pattern traced by hand ? The structural relation between the "means for displaying the mathematical expression" and the "means for displaying a result" is unclear.

5. As to claim 36, the phrase "traced across" is unclear. See discussions in Paragraph 3 above.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

6. Claims 26-44 are rejected under 35 U.S.C. § 103 as being unpatentable over Inagaki (4,578,811) in view of Guyon et al. (5,105,468) in view of Bonadio (5,189,633).

7. As to claim 26, Inagaki taught the invention substantially as claimed including a system (e.g. see fig.1) comprising at least :

a) a touch sensitive means [4] (e.g. see col.3 lines 1-13);

b) a processing circuit [10][20] for recording and recognizing the movement of the traces on the surface (e..g see col.3 lines 1-13; col.3 lines 22-36), and for performing calculations indicated by the operand [2][5] and operators [+][+] and for displaying mathematical results;

c)means [4] for displaying the operand [5][2] and operators [=][+] of the mathematical expression on a display [2] (e.g. see col.3 line 10).

8. Inagaki did not specifically show a processing circuit coupled to the display and a touch sensitive surface as claimed (see claim 26, line 5). However, Guyon disclosed a processing circuit [13] coupled to a display [12] and a touch sensitive surface [11] (e.g. see fig.4). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include Guyon's processing circuit in Inagaki for coupling to the display and the touch sensitive surface as claimed because the use of a processing circuit coupled to display and a touch sensitive surface was already well known in the art, such as the one taught by Guyon.

9. Inagaki did not explicitly show the feature of "one or more mathematical expressions" on the display as claimed. However, Bonadio disclosed one or more mathematical equations in a display (e.g. see fig.2). It would have been obvious to one of ordinary skill in the art to include one or more mathematical expressions as claimed because the use of one or more mathematical expressions was already well known in the art. Bonadio is used because it shows the well known art.

10. As to claim 27, Inagaki taught at least :
a)a touch sensitive means [4] (e.g. see col.3 lines 1-8; col.5 lines 6-14);
b)means [4][10][20] for recognizing handwritten input traced on the touch sensitive means , the handwritten input was a mathematical expression with operators and operand (e.g. 5+2 =);
c)means [4] for displaying the operand [5][2] and operators [=][+] of the mathematical expression on a display [2] (e.g. see col.3 line 10);
d)means [20][40][CAL] for performing calculations indicated by the operators and operand(e.g. see col.3 lines 22-46).

As to the newly amended feature of the touch sensitive surface of the display screen, the "touch sensitive surface" in the original claim is not necessarily the touch sensitive surface of the same "display screen" in the newly amended claim.

11. Inagaki did not explicitly show the tracing of the input across the touch sensitive surface <u>of the display</u> (see claim 27, line 4) as claimed. However, Guyon disclosed a writing of a finger or a pen on a touch sensitive surface [11] of a display [12](e.g. see col.8, lines 18-20, lines 34-37). It would have been obvious to include Guyon's touch sensitive surface [11] of

the display [12] in Inagaki as claimed because the use of a touch sensitive surface of a display was already well known in the art, such as the one taught by Guyon.

12. Inagaki did not specifically show the display screen covered by the touch sensitive surface as claimed. However, Guyon disclosed a display [12] covered by a touch sensitive surface [11] (e.g. see fig.4). It would have been obvious to one of ordinary skill in the art to use a display covered by a touch sensitive surface as claimed in Inagaki because the use of a display screen covered by a touch sensitive surface was already well known in the art. Guyon is used because it shows the well known art.

13. Inagaki did not explicitly show the display of the result on the display screen as claimed. However, Bonadio disclosed a touch sensitive display for displaying a mathematical result [209] resulting equation] (e.g. see fig.2; col.6, lines 7-37). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include mathematical result on the display screen as claimed because the display of the mathematical result (Bonadio) on the display screen (Guyon or Bonadio) could provide additional capability for displaying mathematical result in Inagaki's touch sensitive means.

14. As to claims 28,37, Bonadio also recognized a number of digits as a single number (e.g. see col.17, lines 37-40).

15. As to claims 29,38, Bonadio also recognized his mathematical expressions horizontally and vertically (e.g. see fig.19).

16. As to claims 30,39, Inagaki also disclosed a tracing of a result operator [=] (e.g. see col.3 lines 10-13).

17. As to claims 31,40, Bonadio also animated his mathematical expressions (e.g. see col.5, lines 26-29; col.22 line 39).

18. As to claims 32,41, Bonadio also corrected (e.g. see the editing of the mathematical expressions) his mathematical expressions (e.g. see Abstract, line 3-12).

19. As to claims 33,42, Bonadio also annotated and labelled the recognized movements (e.g. see col.7 lines 2-8).

20. As to claims 34,43, Bonadio also accepted insertions of mathematical expressions (e.g. see col.9, lines 8-25; col.9 lines 42-47 for substitution).

21. As to claims 35,44, Bonadio also included deletions of mathematical expressions (e.g. see col.10, lines 52-54, lines 66-68; col.11, lines 1-2).

22. As to claim 36, Inagaki taught at least steps of :

a) recording movements of a pointing device (e.g. see col.3 lines 1-13);

b) recognizing the movements of a finger tracing a display (e.g. see col.3 lines 1-13);

c) converting the input characters into mathematical expressions comprised of operand and operators (e.g. see col.3 lines 1-13, lines 22-36, lines 53-68; col.4 lines 1-12);
d) displaying the mathematical expression including the operators and operand (e.g. see col.3 lines 8-13; col.4 lines 4-11);
e) performing the calculations indicated by the expression (e.g. see col.4 lines 4-11);
f) displaying the result (e.g. see col.4 lines 11-12).

23. Inagaki did not explicitly show the processing circuit coupled to the touch sensitive surface and the display screen as claimed (see claim 36, lines 4). However, Guyon disclosed a processing circuit [18] coupled to a touch sensitive surface [11] and a display screen [LCD 12] (e.g. see fig.4). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include a processing circuit coupled to a touch sensitive surface and a display screen as claimed because the use of a processing circuit coupled to a touch sensitive surface and a display screen was already well known in the art such as the one taught by Guyon.
24. Inagaki did not specifically show the display of the mathematical result on the screen as claimed. However, Bonadio

disclosed a mathematical expression [205] simultaneously displayed with the mathematical result [209] on the a display (e.g. see fig.2; col.6, lines 7-37). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to use the display of Bonadio's mathematical result in Inagaki for displaying the mathematical result as claimed because the use of Bonadio's display could enhance the interfacing capability of Inagaki for manipulating the mathematical expressions and result more freely on the display.

25. Claims 26-44 are rejected under 35 U.S.C. § 103 as being unpatentable over Inagaki (4,578,811) in view of Guyon et al. (5,105,468) in view of Bonadio (5,189,633) in view of Newton (Henry Norr).

26. As to claim 26, Inagaki taught the invention substantially as claimed including a system (e.g. see fig.1) comprising at least :

a) a touch sensitive display [4] (e.g. see col.3 lines 1-13);

b) a processing circuit [10] [20] for recording and recognizing the movement of the traces on the surface (e..g see col.3 lines

1-13; col.3 lines 22-36), and for performing calculations indicated by the operand [2][5] and operators [+][+] and for displaying mathematical results;
c)means [4] for displaying the operand [5][2] and operators [=][+] of the mathematical expression on the display (e.g. see col.3 line 10).

27. Inagaki did not specifically show a processing circuit coupled to the display and a touch sensitive surface as claimed (see claim 26, line 5). However, Guyon disclosed a processing circuit [13] coupled to a display [12] and a touch sensitive surface [11] (e.g. see fig.4). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include Guyon's processing circuit in Inagaki for coupling to the display and the touch sensitive surface as claimed because the use of a processing circuit coupled to display and a touch sensitive surface was already well known in the art, such as the one taught by Guyon.
28. Inagaki did not explicitly show the display of the mathematical result on the display screen as claimed. However, Bonadio disclosed a display of a mathematical result [resulting equation 209] on a display (e..g see fig.20). It would have been obvious to one of ordinary skill in the art to use Bonadio for displaying the mathematical result in Inagaki as claimed because

the use of Bonadio's display could enhance the interfacing capability of Inagaki for manipulating the mathematical expressions and result more freely on the display.

29. Inagaki did not explicitly show the display of the mathematical result on the display screen as claimed. However, Nor Henry taught a Newton computer for displaying a mathematical result on the display screen (e.g. see second page, lines 22-34). It would have been obvious to use the Newton for displaying mathematical expression on the display screen as claimed because it was already well known in the art at the time the claimed invention was made. Newton is used because it shows the well known art.

30. Inagaki did not explicitly show the feature of "one or more mathematical expressions" on the display as claimed. However, Bonadio disclosed one or more mathematical equations in a display (e.g. see fig.2). It would have been obvious to one of ordinary skill in the art to include one or more mathematical expressions as claimed because the use of one or more mathematical expressions was already well known in the art. Bonadio is used because it shows the well known art.

31. As to claim 27, Inagaki taught at least :
a)a touch sensitive means [4] (e.g. see col.3 lines 1-8; col.5 lines 6-14);
b)means [4][10][20] for recognizing handwritten input traced on the touch sensitive means , the handwritten input was a mathematical expression with operators and operand (e.g. 5+2 =);
c)means [4] for displaying the operand [5][2] and operators [=][+] of the mathematical expression on a display [2] (e.g. see col.3 line 10);
d)means [20][40][CAL] for performing calculations indicated by the operators and operand(e.g. see col.3 lines 22-46).

32. Inagaki did not explicitly show the tracing of the input across the touch sensitive surface of the display (see claim 27, line 4) as claimed. However, Guyon disclosed a writing of a finger or a pen on a touch sensitive surface [11] of a display [12](e.g. see col.8, lines 18-20, lines 34-37). It would have been obvious to include Guyon's touch sensitive surface [11] of the display [12] in Inagaki as claimed because the use of a touch sensitive surface of a display was already well known in the art, such as the one taught by Guyon.

33. Inagaki did not specifically show the display screen covered by the touch sensitive surface as claimed. However, Guyon disclosed a display [12] covered by a touch sensitive surface [11] (e.g. see fig.4). It would have been obvious to one of ordinary skill in the art to use a display covered by a touch sensitive surface as claimed in Inagaki because the use of a display screen covered by a touch sensitive surface was already well known in the art. Guyon is used because it shows the well known art.

34. Inagaki did not explicitly show the display of the result on the display screen as claimed. However, Bonadio disclosed a touch sensitive display for displaying a mathematical result [209 resulting equation] (e.g. see fig.2; col.6, lines 7-37). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include mathematical result on the display screen as claimed because the display of the mathematical result (Bonadio) on the display screen (Guyon or Bonadio) could provide additional capability for displaying mathematical result in Inagaki's touch sensitive means.

35. Inagaki did not explicitly show the display of the mathematical result on the display screen as claimed. However, Nor Henry taught a Newton computer for displaying a mathematical result on the display screen (e.g. see second page, lines 22-34). It would have been obvious to use the Newton for displaying

mathematical expression on the display screen as claimed because it was already well known in the art at the time the claimed invention was made. Newton is used because it shows the well known art.

36. As to claims 28,37, Bonadio also recognized a number of digits as a single number (e.g. see col.17, lines 37-40).

37. As to claims 29,38, Bonadio also recognized his mathematical expressions horizontally and vertically (e.g. see fig.19). See also the Newton in second page by Henry Norr.

38. As to claims 30,39, Inagaki also disclosed a tracing of a result operator [=] (e.g. see col.3 lines 10-13).

39. As to claims 31,40, Bonadio also animated his mathematical expressions (e.g. see col.5, lines 26-29; col.22 line 39).

40. As to claims 32,41, Bonadio also corrected (e.g. see the editing of the mathematical expressions) his mathematical expressions (e.g. see Abstract, line 3-12).

41. As to claims 33,42, Bonadio also annotated and labelled the recognized movements (e.g. see col.7 lines 2-8).

42. As to claims 34,43, Bonadio also accepted insertions of mathematical expressions (e.g. see col.9, lines 8-25; col.9 lines 42-47 for substitution).

43. As to claims 35,44, Bonadio also included deletions of mathematical expressions (e.g. see col.10, lines 52-54, lines 66-68; col.11, lines 1-2).

44. As to claim 36, Inagaki taught at least steps of :
a) recording movements of a pointing device (e.g. see col.3 lines 1-13);
b) recognizing the movements of a finger tracing a display (e.g. see col.3 lines 1-13);
c) converting the input characters into mathematical expressions comprised of operand and operators (e.g. see col.3 lines 1-13, lines 22-36, lines 53-68; col.4 lines 1-12);
d) displaying the mathematical expression including the operators and operand (e.g. see col.3 lines 8-13; col.4 lines 4-11);
e) performing the calculations indicated by the expression (e.g. see col.4 lines 4-11);
f) displaying the result (e.g. see col.4 lines 11-12).

45. Inagaki did not explicitly show the processing circuit coupled to the touch sensitive surface and the display screen as claimed (see claim 36, lines 4). However, Guyon disclosed a processing circuit [18] coupled to a touch sensitive surface [11] and a display screen [LCD 12] (e.g. see fig.4). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include a processing circuit coupled to a touch sensitive surface and a display screen as

claimed because the use of a processing circuit coupled to a touch sensitive surface and a display screen was already well known in the art such as the one taught by Guyon.

46. Inagaki did not specifically show the display of the mathematical result on the screen as claimed. However, Bonadio disclosed a mathematical expression [205] simultaneously displayed with the mathematical result [209] on the a display (e.g. see fig.2; col.6, lines 7-37). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to use the display of Bonadio's mathematical result in Inagaki for displaying the mathematical result as claimed because the use of Bonadio's display could enhance the interfacing capability of Inagaki for manipulating the mathematical expressions and result more freely on the display.

47. Inagaki did not explicitly show the display of the mathematical result on the display screen as claimed. However, Nor Henry taught a Newton computer for displaying a mathematical result on the display screen (e.g. see second page, lines 22-34). It would have been obvious to use the Newton for displaying mathematical expression on the display screen as claimed because it was already well known in the art at the time the claimed invention was made. Newton is used because it shows the well known art.

48. In regard with the 1449 filed by the applicant on May 22 95, applicant is advised to provide the publication date for each of the following :

a)"Nope. It Wasn't Steroids!" MICROSLATE;

b)"Microsoft Windows™ for PEN Computing Resource Guide: Pens,";

c)"SuperScript II DISPLAY TABLET," SuperScript Inc.;

d)"Sales Automation Solutions: General Programming, Inc. uses Infolio™ to premiere Sales-Manager™ tool," PI Systems Corporation;

e)"de-ja vu," Slate Corporation;

f)"Desktop Pen Computing," FTG Data System;

g)"Wacom Application Report 6 For Pen Computer Manufacturers and Software Developers,"

h)"The Newest Advancement in Computers...THE PEN!"

i)"Numbers to go: Pencil Portable Spreadsheet," PenWare, Inc.;

j)"AMS Donates Pen Computing Exhibit to The Computer Museum,".

Applicant's arguments with respect to claims 26-44 have been considered but are deem to be moot in view of the new grounds of rejection.

Inagaki (4,578,811), Bonadio (5,189,633), and the Apple's Newton computer by Henry Norr were already cited to the applicant in a previous Office action. Therefore, copies of these references are not included in this Office action.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel H. Pan whose telephone number is (703) 9696.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305 9600.

DP/09/12/95